中国苦苣苔科植物的研究(续)

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NOTULAE DE GESNERIACEIS SINENSIBUS (CONTINUED)

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[The Wade-Giles system of transliteration has been used throughout. The author's name is properly spelled Wang Wen-ts'ai; future publications from China will use the pinyin system of Romanization, in which the name will be written Wang Wencai. Corrections and additions have been made in starred footnotes or brackets.]

THE FUNNELFORM GESNERIAD GENUS --<u>Didissandra</u> Clarke

<u>Didissandra</u> Clarke in DC. Monogr. Phan. 5: 65 (1883); Burtt in Not. Bot. Gard. Edinb. 21: 196-198 (1954).

Raphiocarpus Chun in Sunyatsenia 6: 273 (1946), syn. nov. THE GLABROUS DIDISSANDRA -- D. sinica

Didissandra sinica (Chun) W. T. Wang, comb. nov. [Acta Phytotax. Sin. 13(3): 97, 1975]

Raphiocarpus sinicus Chun, l.c. 275, fig. 32, pl. 44 (1946).

Kwangsi: Shih-wan Ta-shan, <u>Liang Hsiang-jih</u> <u>69820, T'ai Jen-ch'ang 8310</u>; Lung-chou, Ta-ch'ing Mt., Liang Hsiang-jih 65870. (The above specimens are all syntypes)

Distribution: Kwangsi (endemic).

The corolla of this species is funnelform, with 4 fertile stamens, and the same as in the genus Didissandra Clarke. Ch'en Huan-yung [Chun Woon-Young] in 1946 established the new genus Raphiocarpus Chun upon the basis of this species, but accepting W. G. Craib's incorrect inclusions for Didissandra, he compared his new genus with the latter. W. G. Craib in 1919 possibly overlooked the then monospecific genus Corallodiscus Batal., and took many species from that correct genus and described these species in the genus Didissandra, and upon these species produced his general definition of genus "Didissandra"^{1,2}. Therefore the definition that he established for the genus "Didissandra" actually equals the definition of the genus Corallodiscus. In 1947, B. L. Burtt realized Craib's error, and moved to the genus <u>Corallodiscus</u> all the relevent new species from the latter's 1919 description³. In 1962, B. L. Burtt in writing the generic keys to the Gesneriaceae of the Old World pointed out the subtle differences between Raphiocarpus Chun and Didissandra Clarke, although he had not seen specimens of this species and had not yet made a decision as to its placement⁴.

W. G. Craib, Gesneracearum novitates. Not. Bot. Gard. Edinb. 11: 240-249 (1919).

2____, Didissandra and allied genera in China and . India, loc. cit. 11: 255-261 (1919).

³B. L. Burtt, Didissandra and Corallodiscus, <u>Gard</u>. Chron., III, 122: 204, 212 (1947).

4____, Studies on the Gesneriaceae of the Old World XXIV: Tentative keys to the tribes and genera, Not. Bot. Gard. Edinb. 24: 213, 215 (1962).

THE FUNNELFORM GESNERIAD -- D. sinoophiorrhizoides

Didissandra sinoophiorrhizoides W. T. Wang, nom. nov. [Acta Phytotax. Sin. 13(3): 98, 1975] Lysionotus ophiorrhizoides Hemsl. in Journ. Linn. Soc. Bot. 26: 224 (1890), non Didissandra ophiorrhizoides K. Schum.

Didymocarpus cavaleriei Lévl. in Fedde, Rep. sp. nov. 9: 453 (1911), non Didissandra cavaleriei Lévl. et Vant.

Anna ophiorrhizoides (Hemsl.) Burtt et Davidson, in Not. Bot. Gard. Edinb. 21: 233, cum descr. ampl. (1955); Burtt, 1.c. 22: 305 (1958).

Szechuan: Omei Mt., 850-1200 m above sea level, Fang Wen-p'ei 2455, Cheng Wan-chun 6739, Liu Sheng-o [Liu Tchen-ngo] et al. 948, Yang Kuang-hui 57539, Faber, unnumbered (Holotypus, photograph seen).

Distribution: Szechuan, Kweichow.

F. Pellegrin in 1930 described a new genus <u>Anna</u> Pellegr.⁵, containing one species <u>A</u>. <u>submontana</u> Pellegr., endemic to N Yunnan. This genus has a funnelform corolla, has 4 fertile stamens, and is extremely close to <u>Didissandra</u> Clarke, the only point of difference with the latter being that the bracts are large, rotund, and cover the inflorescence before anthesis is complete. B. L. Burtt and R. Davidson in 1955 (see the above study) found <u>Lysionotus ophiorrhizoides</u> Hemsl. whose description has characteristics similar to the <u>A</u>. <u>submontana</u> Pellegr., and moved the former to the genus <u>Anna</u> Pellegr. But the bracts characteristic of some species of genus <u>Didissandra</u> Clarke also have this condition, such as <u>D</u>. <u>begoniifolia</u> Lév1., and since we feel that to establish a new genus only on the basis of the bract characteristic is not acceptable, we now return this species to the genus <u>Didissandra</u> Clarke.

This species is a small shrub, close to the aforementioned species <u>D</u>. <u>sinica</u> (Chun) W. T. Wang, but it can be distinguished by its stem, and leaves which are sparsely puberulent, the leaves lanceolate, bracts relatively large, rotund, while the stem and leaves of <u>D</u>. <u>sinica</u> are both glabrous, the

⁵ F. Pellegrin, Anna, genere nouveau de Gesnéracées d'Indo-Chine, <u>Bull. Soc. Bot. France</u>, 77: 45 (1930).

leaves long elliptic, bracts relatively small, and elongate lanceolate.

In "Iconographia Cormophytorum Sinicorum" volume 4 page 133 there is a figure of <u>D. sinoophior</u>rhizoides, which can be consulted.

THE LONG-TUBED DIDISSANDRA -- D. macrosiphon

Didissandra macrosiphon (Hance) W. T. Wang, comb. nov. [Acta Phytotax. Sin. 13(3): 98, 1975] Chirita? macrosiphon Hance in Ann. Sci. Nat. ser. 5, 5: 231 (1866); Clarke in DC. Monogr. Phan. 5: 131 (1883); Hemsl. in Journ. Linn. Soc. Bot. 26: 231 (1890).

Kwangtung: Chao-ch'ing, Ting-hu Mt., in a forest on damp rocks, <u>Hou K'uan-chao</u> [Hou Foon-chew] <u>74141</u>, <u>T. Sampson</u> (Hance n. 7562 in Herb. propr.) (Holotypus, photograph seen); Hsin-yi, <u>Huang Chih</u> 37736.

Distribution: Kwangtung, Kwangsi.

The corolla of this species is long funnelform, with 4 fertile stamens, the same as in the genus \underline{Di} -<u>dissandra</u> Clarke. This species is an annual herb, leaves densely pubescent, relatively close to \underline{D} . <u>begoniifolia</u> Lévl., but this species can be distinguished by the flowers which are borne singly and axillary, bracts caducous, corolla orange red, long funnelform, ca. 6 cm long, below the middle suddenly becoming thin so as to be rounded cylindric; \underline{D} . <u>begoniifolia</u> (distributed in SE Yunnan and SW Kweichow) has an umbellate inflorescence, bracts rounded ovate, to 2.4 cm long, to 3 cm broad, corolla purple, funnelform, gradually becoming thin from the top to the bottom, to 5 cm long.

THE CORAL GESNERIAD GENUS --Corallodiscus Batal.

THE STONE FLOWER -- C. flabellatus

Corallodiscus flabellatus (Craib) Burtt in Gard. Chron. ser. 3, 122: 212 (1947).

THE BRIGHT-CALYX VARIETY -- var. leiocalyx

The type variety's pedicel and calyx all have either a dense or sparse rust-colored villous indument, while this new variety has pedicels glabrous or very quickly becoming glabrous, calyx is entirely glabrous.

var. <u>leiocalyx</u> W. T. Wang, var. nov. [<u>Acta</u> <u>Phytotax</u>. <u>Sin</u>. 13(3): 99, 1975]

A var. <u>flabellato</u> pedicellis glabris vel cito glabrescentibus, calyce glabro differt.

Tibet: Yi-kung, 2200 m above sea level, on rocky cliffs on a mountainside, corolla white, tube light purple, 19 July 1965, <u>Ying Chun-sheng</u> [Ying Tsün-shen], <u>Huo Teh-yuan 649</u> (Holotypus); Lin-chih, Ni-hsi, 3040 m above sea level, on dry rocks on a mountainside, flower white, tube base purple blue, 28 July 1965, <u>Chang Yung-t'ien</u>, <u>Lang K'ai-yung</u> [Lang Kai-yung] <u>1082</u>; Lung-tzu, Ko-hsi, 3700 m above sea level, gravel on a mountain-side, 21 August 1960, Ch'uan Kuo-hsun 639.

> THE HORSE-BELL GESNERIAD GENUS --Oreocharis Benth.

THE BRIGHT-LEAVED LOTUS-ON-A-ROCK -- O. leiophylla

Perennial acaulescent herb. Leaves ca. 5, all borne from the base; leaf blades elliptic ovate or ovate, 5-8 cm long, 3.6-5.5 cm broad, apex acute, base slightly cordate or nearly truncate, margin with shallow small obtuse teeth, both sides glabrous or nearly glabrous, lateral veins ca. 6 and opposite; the petioles 3-7.5 cm long, with a dense tan puberulence. Scapes ca. 2, ca. 11 cm tall, with tan pubescence; cymes umbellate, with 11-13 flowers; bracts elongate lanceolate, ca. 6 mm long; the pedicels thin, ca. 10 mm long, with brown puberulence; the calyx ca. 2 mm long, 5 lobes divided to near the base, the lobes linear lanceolate, with sparse long marginal hairs; corolla white (?), oblique campanulate, ca. 3.5 mm long, glabrous, limb obscurely bilabiate, of 5 nearly equal lobes, the lobes oblong, ca. 1.5 mm long; stamens 4, distinct, well exserted, glabrous, anthers broadly ovate, 0.5 mm long; disk annular, glabrous; pistil glabrous.

This species is close to the Big-leaved Oreocharis -- O. <u>benthamii</u> Clarke, but they can be distinguished by the leaf blades which are glabrous or nearly glabrous, and the flowers relatively small; O. <u>benthamii</u> has the leaf blades' adaxial sides densely puberulent, abaxial sides with rustcolored tomentose indument, and the corolla ca. 9 mm long.

Oreocharis <u>leiophylla</u> W. T. Wang, sp. nov. [Acta Phytotax. Sin. 13(3): 99, 1975]

Affinis O. <u>benthamii</u> Clarke, sed foliorum laminis glabris subglabrisve, floribus multo brevioribus (corolla circ. 3.5 mm longa) differt.

Fukien: Lien-ch'eng, Lo-ti, 20 October 1932, Lin Yung [Ling Yong] <u>4182</u> (Holotypus).

THE ERECT-PETALLED GESNERIAD GENUS --Ancylostemon Craib

THE LOW ANCYLOSTEMON -- <u>A</u>. <u>humilis</u> Plate 15, figure 6.

Perennial low-growing acaulescent herb. Leaves 8-17, all borne from the base; the leaf blades ovate, elliptic ovate or elliptic, 1.1-2.2 cm long, 0.7-1.2 cm broad, apex somewhat obtuse, base rotund or slightly cordate, margin crenate, both sides with rust-colored villous indument or adaxial side becoming glabrous, veins on adaxial side frequently immersed, or abaxial side prominent; the petioles 1.8-3.6 cm long, with rust-colored villous indument. Scapes 1-4, 5.5-7.5 cm tall, indument similar to that of the petioles, becoming glabrous; cymes frequently umbellate, of 1-4 flowers; bracts linear, 2-4 mm long, villous; the calyx ca. 2 mm long, outside sparsely puberulent, 5 lobes divided to near the base, the lobes linear lanceolate, apex blunt; the corolla light yellowish white, tubular funnelform, ca. 11 mm long, outside with extremely short pubescence, inside glabrous, the limb bilabiate, upper lip ca. 1.2 mm long, inside concave, lower lip ca. 2.5 mm long, 3-lobed, the middle lobe nearly square, lateral lobes relatively small, oblique broadly ovate; stamens 4, didynamous, glabrous, front pair slightly exserted from the corolla, rear pair included, anthers coherent as pairs, nearly orbicular, diameter ca. 1.2 mm; disc annular,

glabrous; pistil ca. 8 mm long, glabrous, ovary nearly linear, style short. Capsule linear, ca. 2 cm long, glabrous.

The characteristic of this species is its diminutive habit. Other species of <u>Ancylostemon</u> have leaf blades 3.5 cm or more long, calices 3.5 cm or more long, corollas 2 cm or more long (<u>A</u>. <u>lancifolius</u> (Franch.) Burtt has the corolla ca. II mm long, but purple, leaf blades to 11 cm long, lanceolate).

Ancylostemon humilis W. T. Wang, sp. nov. [Acta Phytotax. Sin. 13(3): 100, 1975]

Didissandra saxatilis Hemsl. var. microcalyx Hemsl. in Journ. Linn. Soc. Bot. 26: 227 (1890).

Ancylostemon saxatile (Hemsl.) Craib var. microcalyx Hemsl. ex Craib in Not. Bot. Gard. Edinb. 11: 266 (1919).

Species multo humilis a omnibus congenericis adhuc cognotis facile distincta.

Szechuan: Wu-shan, Tang-yang, 2100 m above sea level, on rocks in a forest, flower light yellowish white, 26 July 1958, <u>Yang Kuang-hui</u> 59063 (Holotypus).

Rupei: Pa-tung, 2100 m above sea level, on damp calcareous rocks, flowers unopened, 22 July 1957, Ch'uan Kuo-hsun, Chang Chih-sung 960.

The genus <u>Ancylostemon</u> is endemic to the southwestern part of this country, with ca. 8 species. W. G. Craib in 1919 described this genus and included a key to the species² (see the aforementioned paper, page 266), and in 1954, B. L. Burtt and R. Davidson made additions⁶. Below is given the latter key translated and with additions.

⁶B. L. Burtt & R. Davidson, Studies in the Gesneriaceae of the Old World, V: Notes on Ancylostemon, Not. Bot. <u>Gard</u>. <u>Edinb</u>. 21: 215-216 (1954).

- 2. Scape and petioles with dense tan tomentose indument (Kweichow) THE KWEICHOW ANCYLOSTEMON -- A notochlaenus (Lévl. et Vant.) Craib
- Scape and petioles with patent brown bristly indument.
 - Ovary densely puberulent (E Szechuan, W Hupei, S Shensi)
 ANCYLOSTEMON -- A. saxatilis (Hemsl.) Craib
 Ovary glabrous or with a few hairs scattered.
 - Calyx at time of flowering not over 7 mm long.
 - 5. Leaf blades to 2.2 cm long, to 1.2 cm broad, margin evenly crenulate, petioles to 3.6 cm long; calyx ca. 2 mm long, 5 lobes divided to near the base; corolla yellowish white, ca. 1.1 cm long; pistil ca. 8 mm long (E Szechuan, W Hupei) THE LOW ANCYLOSTEMON -- A. humilis W. T. Wang
 - ANCYLOSTEMON -- <u>A</u>. <u>humilis</u> W. T. Wang 5. Leaf blades to 14 cm long, to 7.5 cm broad, margin with uneven coarse teeth, some teeth appearing as small lobes, petioles to 9 cm long; calyx 3.5-7 mm long, 5 lobes divided to near the middle; corolla orange yellow, 2.2-2.6 cm long; pistil ca. 1.4 cm long.

 - 6. Leaves chartaceous, adaxial side with dense relatively long white hair, and also some brown bristly hairs, abaxial side also with dense white hairs between the bristly veins; seeds 0.5 mm long (N Yunnan) THE NORTH-YUNNAN ANCYLOSTEMON -- A. mairei (Lévl.) Craib
 - 4. Calyx at time of flowering ca. 1 cm long.
 - Corolla outside puberulent (W Yunnan) THE CONCAVE ANCYLOSTEMON -- <u>A</u>. <u>aureus</u> (Franch.) Burtt

- Corolla outside with long bristly hairs (Yunnan in the area of Ping-ch'uan).
 - 8. Corolla twice as long as calyx, dorsal side not inflated THE FOX-HAIR ANCY-LOSTEMON - A. vulpinus Burtt et Davidson
 8. Corolla four times* as long as calyx, upper part of dorsal side inflatedTHE HAIRY-FLOWERED ANCYLOSTEMON -- A. trichanthus Burtt et Davidson

THE STONE-MOUNTAIN GESNERIAD GENUS --Petrocodon Hance

THE TOOTHED-MARGINED PETROCODON -- P. <u>denticulatus</u> Plate 15, figure 7

Perennial acaulescent herb; rhizomes to 4 cm long, 4-7 mm thick, with long thin roots. Leaves ca. 7, all borne from the base, long-petiolate; leaf blades oblong or oblong lanceolate, 4.5-11.5 cm long, 1.8- 3.8 cm broad, apex short acuminate or acute, base acute, margin dentate or denticulate, both sides with short appressed hairs, lateral veins 3-5 and opposite, with the midveins curving obliquely upward; the petioles 2-6.5 cm long, slightly thick, with dense short appressed hairs. Scapes 1-2, 9-14 cm tall, indument similar to that of the petioles; cymes umbellate, flowers 6-12; bracts linear lanceolate, to 7 mm long; peduncle ca. 6 mm long, with dense patent puberulence; calyx campanulate, ca. 2 mm long, outside with short hairs, 5 lobes some divided to the base, the lobes lanceolate subulate; corolla urceolate, ca. 8 mm long, outside with sparse short hairs, of 5 nearly equal lobes, the lobes triangular or nearly deltate, ca. 1.8 mm long; stamens 2, borne above the base of the corolla tube, glabrous, reaching to the corolla throat, anthers coherent; disk caducous; pistil glabrous.

The genus <u>Petrocodon</u> originally contained only one species, The Petrocodon -- <u>P</u>. <u>dealbatus</u> Hance, distributed in Kwangtung, Kwangsi, Kweichow, and W Hupei, whose leaf margins are entire or with extremely small teeth. <u>P</u>. <u>denticulatus</u> now discovered is extremely close to the former, but can be distin-

*Sic; three times according to Burtt and Davidson.

guished by the leaf margins that are dentate or denticulate.

Petrocodon denticulatus W. T. Wang, sp. nov. [Acta Phytotax. Sin. 13(3): 101, 1975]

Proximus <u>P</u>. <u>dealbato</u> Hance, specie typicae huius generis monotypici adhuc cognoti, a quo foliis dentatis denticulatisve differt.

Hunan: Ch'ien-yang, <u>Anhuei-Chekiang</u> <u>Agricultural</u> <u>School</u> <u>60</u>; same place, Hsueh-feng Mt., <u>9 September</u> <u>1953</u>, <u>Anhuei-Chekiang</u> <u>Agricultural</u> <u>School</u> <u>407</u> (Holotypus).

> THE REAR-BUDDED GESNERIAD GENUS--Opitandra* Burtt

THE LUNG-SHENG OPITHANDRA -- O. lungshengensis Plate 15, figure 8

Perennial acaulescent herb. Leaves 7-9, all borne from the base; leaf blades elliptic ovate or ovate, 4.2-7 cm long, 3-4.8 cm broad, apex apiculate or somewhat obtuse, base shallowly cordate, margin shallowly crenate, adaxial side with a somewhat dense white indument, 1.5-3.2 mm long articulated pubescence, abaxial side puberulent, lateral veins 5-6 and opposite; the petioles 1-3 cm long, with dense white puberulence. Scapes 1-3, 5.7-8 cm tall, with spreading villous indument; cyme umbellate, of 2-4 flowers; bracts linear lanceolate, ca. 8 mm long, with a dense white pubescence; the pedicels 7-11 mm long, with a patent pubescence; calyx ca. 7 mm long, outside with a dense pubescence, 5 lobes divided to the base, the lobes linear lanceolate; corolla whitish red, narrowly funnelform, ca. 3 cm long, outside sparsely puberulent, limb bilabiate, upper lip ca. 7.5 mm long, of 2 shallow lobes, the lobes rounded ovate, lower lip ca. 11 mm long, 3 lobes, the middle lobe largest, broadly ovate; stamens 2, borne slightly above the middle of the back of the corolla tube, elongating to the corolla mouth, filaments puberulent, anthers coherent, glabrous; staminodes 2, narrowly linear, ca. 5.5 mm long; disk annular, ca. 1.2 mm tall, glabrous; pistil slightly longer than the stamens, ca. 2.5 cm long, ovary ca. 1.3 cm long,

*Sic; usual spelling is Opithandra.

upper part and the style sparsely puberulent, stigma 2-lobed, the lobes broadly ovate, ca. 1 mm long.

This species is close to the Swatow Opithandra -- O. dalzielii (W. W. Sm.) Burtt, but the leaves are relatively small, the adaxial side with white villous indument, abaxial side white pubescent, the bracts relatively small, ovary upper part only and style with extremely sparse short hairs, while the leaf blades of O. dalzielii reach to 15 cm long, both sides covered with a tan hirsute indument, bracts 2-3 cm long, and the ovary and style both covered with a dense pubescence.

Opitandra lungshengensis W. T. Wang, sp. nov. [Acta Phytotax. Sin. 13(3): 102, 1975]

A <u>O</u>. <u>dalzielii</u> (W. W. Smith) Burtt e descr., foliis minoribus supra albo-villosis subtus albopubescentibus, bracteis minoribus, ovario superne tantum cum stylo sparsissime puberulo differt.

Kwangsi: Lung-sheng, P'ing-shui district, T'aop'u villge, 800 m above sea level, below a thin forest, flowers whitish red, 14 October 1955, <u>Kwangsi-Kwangtung-Pukien</u> <u>Forest</u> <u>Investigation</u> <u>Expedition 1059</u> (Holotypus).

B. L. Burtt in 1956 used the plant formerly known as <u>Oreocharis primuloides</u> (Miq.) Clarke endemic in Japan to establish the then monospecific genus <u>Opitandra</u> Burtt⁷. Two years later, in 1958, he placed several gesneriads endemic in China in this genus⁸. The genus <u>Opithandra</u> is extremely close to <u>Chirita</u> D. Don and <u>Didymocarpus</u> Wall., the important differences are, in this genus the rear 2 stamens are fertile, the front 2 stamens are sterile, while in the other two genera the rear 2 stamens are sterile, and the front 2 stamens are fertile. This genus has about 6 species, of which 5 species are distributed in this country in the three provinces of Kwangsi, Kwangtung and Szechuan, and 1 species distributed in Japan. Below is a key listing all the species of this genus found in this country, translated from B. L. Burtt's key of 1958 (p. 302), with additions.

⁷B. L. Burtt, An independent genus for Oreocharis primuloides, <u>Baileya</u> 4: 160-162 (1956).

⁸_____, Studies in the Gesneriaceae of the Old World, XII: Opitandra, a genus with sterile anticous stamens, <u>Not. Bot. Gard. Edinb.</u> 22: 301-303 (1958).

1. Petioles and leaf blades abaxial sides both with tomentose indument (SE Kwangsi) THE TOMENTOSE OPITHANDRA -- O. sinohenryi (Chun) Burtt (Didymocarpus sino henryi Chun)

1. Petioles and leaf blades pubescent.

- 2. Leaf blades corrugate-bullate* (Szechuan) THE WRINKLED-LEAVED OPITHANDRA -- O. fargesii (Franch.) Burtt (Rottlera fargesii Franch.)
- 2. Leaves smooth.
 - 3. Corolla ca. 1 cm long; pistil exserted from the corolla (Kwangsi) THE SMALL-FLOWERED OPITHANDRA - <u>O. acaulis</u> (Merr.) Burtt (Chirita acaulis Merr.) 3. Corolla 3-3.5 cm long; pistil included within the corolla.
 - 4. Scapes and leaves with white pubescence; bracts ca. 8 mm long; corolla ca. 3 cm long; ovary upper part only and the style with a few hairs (N Kwangsi) THE LUNG-SHENG OPITHANDRA - O. lungshengensis W. T. Wang 4. Scape and leaves with tan hirsute indument;
 - bracts 20-30 mm long; corolla ca. 3.5 cm long; ovary and style both with a dense pubescence (E Kwangtung) THE SWATOW OPITHANDRA - O. dalzielii (W. W. Sm.) Burtt (Chirita dalzielii W. W. Sm.)

THE LIPPED-STYLE GESNERIAD GENUS --Chirita D. Don

THE WINGED-LOBED CHIRITA -- C. pinnatifida

Chirita pinnatifida (Hand.-Mazz.) Burtt in Not. Gard. Edinb. 23: 99(1960); Iconographia Cor-Bot. mophytorum Sinicorum 4: 137, figure 5688 (1975).

Didymocarpus pinnatifidus Hand.-Mazz. in Sinensia 5: 8 (1934).

Chirita quercifolia Wood in Not. Bot. Gard. Edinb. 31: 369(1972) et 33: 144 (1974), syn. nov.

*Burtt: verrucose-bullate.

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Kwangtung: Lien-nan, 820 m above sea level, <u>T'an P'ei-hsiang</u> [P. C. Tang] <u>58918</u>; Yang Shan, <u>Teng</u> Liang <u>341</u>.

Kwangsi: Jung-shui, <u>Ch'en</u> <u>Shao-ch'ing</u> <u>16183;</u> Tzu-yuan, <u>Chung Chi-hsin</u> <u>83461;</u> Hsiang-chou county, <u>Huang Chih</u> <u>40038;</u> Ling-yun, <u>T'ai</u> <u>Jen-ch'ang</u> <u>6988</u> (isotype of <u>Didymocarpus pinnatifidus</u> Hand.-Mazz.!).

Kweichow: Jung R., 920-1300 m above sea level, Chien Chuo-p'o et al. 51486, 51814, South Kweichow Expedition 3170.

Hunan: Yi-chang, 1200 m above sea level, <u>Ch'en</u> Shao-ch'ing 2762.

Kiangsi: Shang-yu, 800 m above sea level, Kiangsi Expedition 71-413.

Fukien: Sui-an, Huang-kang Mt., 1100 m above sea level, <u>Chien Chuo-p'o et al. 400931</u>.

Chekiang: T'ai-shun, Chang Shao-yao 3710.

This species is distributed in this country in the above listed provinces, its leaves are all borne from the base, calyx of five lobes divided to near the base, the lobes often denticulate and close to the Locust-seven* Chirita -- <u>C</u>. <u>fimbrisepala</u> Hand.-Mazz. and other species, but it can be easily distinguished by the leaves shallowly-pinnately lobed, which is its only distinguishing characteristic.

Recently Comrade Wu Cheng-yi discovered that <u>Chirita quercifolia</u> Wood (see above reorganization) described in 1972 by D. Wood on the basis of a specimen from Kwangsi should be classified with <u>C</u>. <u>pinnatifida</u> (Hand.-Mazz.) Burtt, and this writer agrees with his opinion.

THE YUNNAN-SZECHUAN CHIRITA -- C. forrestii

Chirita forrestii Anthony in Not. Bot. Gard. Edinb. 18: 192 (1934).

var. forrestii

Yunnan: Chung-tien, Pai-ti, <u>G</u>. <u>Forrest</u> 20564 (Isosyntypus!).

Szechuan: Mu-li, 2650 m above sea level, <u>Yü</u> <u>Teh-chün</u> [Yü Te-tsun] <u>14160</u>; Lang-ta, 2300 m above sea level, <u>Feng Kuo-mei</u> <u>2753</u>.

Distribution: NW Yunnan, SW Szechuan.

*Exact meaning unclear.

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THE ACUTELY-DENTATE VARIETY -- var. <u>acutidentata</u> Plate 16, figure 10.

The type variety's leaf margins have relatively small obtuse teeth, differing from this variety's leaf margin's triangular and relatively large acute teeth.

var. <u>acutidentata</u> W. T. Wang, var. nov. [<u>Acta</u> <u>Phytotax</u>. <u>Sin</u>. 13(3): 103, 1975]

A var. <u>forrestii</u> foliis margine acute majusque dentatis differt.

Szechuan: T'ien-ch'uan, Erh-lang Mt., Chiut'iao ridge, 1900 m above sea level, flower light purple, 27 July 1953, <u>Chiang Hsing-hsing 35070</u> (Holotypus); unspecified place, <u>Ch'ü K'uei-ling 6215</u>.

THE LONG-PEDUNCLED CHIRITA -- <u>C</u>. <u>longipedunculata</u> Plate 16, figure 9

Small half-shrub. Stems to 36 cm long, basal diameter ca. 5 mm, not branched, upper part puberulent, lower part becoming glabrous. Leaves oppo-site; leaf blades oblong or oblong lanceolate, slightly unequal, 11-20 cm long (including petiole 0.9-3 cm), 3.2-5.2 cm broad, apex sharply acuminate, base cuneate, margin denticulate, both sides with somewhat dense and closely appressed puberulence, lateral veins 7-9 and opposite, arching upwardly. Cymes on long peduncles, of ca. 4 flowers, with slightly dense patent puberulence; peduncles 6-8 cm long; bracts linear, ca. 3 mm long; the calyx campanulate, ca. 6.5 mm long, outside with slightly dense closely appressed puberulence, 5 lobes divided to 1 mm above the base, the lobes narrowly lanceolate; the corolla yellow, tubular funnelform, ca. 2.8 cm long, glabrous, tube ca. 1.4 cm long, limb bilabiate, upper lip ca. 7 mm long, 2-lobed, the lobes rounded ovate, lower lip nearly as long as the tube, 3-lobed, center lobe large, broadly ovate; the stamens 2, borne 1 mm above the basal part of the corolla, ca. 10 mm long, glabrous, anthers coherent, broadly ovate, ca. 1.5 mm long; staminodes 2, narrowly linear, 2.2-3.4 mm long; disk annular, glabrous, shallowly lobed; pistil ca. 1.1 cm long, glabrous, ovary elongate oblong, style slightly shorter than the ovary, stigma 2-lobed, the lobes broadly ovate.

Wang, Notulae de Gesneriaceis

This species is close to <u>Chirita kurzii</u> Clarke (distributed in Nepal, Sikkim), but in that the bracts are linear, relatively short, the calyx also relatively short, pistil glabrous, stigma obviously 2-lobed, while the bracts of <u>C</u>. <u>kurzii</u> Clarke are elliptic, 10 mm long, the calyx 15 mm long, ovary and style completely puberulent, stigma nearly peltate.

Chirita longipedunculata W. T. Wang, sp. nov. [Acta Phytotax. Sin. 13(3): 104, 1975]

Similis <u>C</u>. <u>kurzii</u> Clarke e descr., a qua bracteis linearibus brevioribus, calyce breviore, pistillo glabro, stigmate conspicue 2-lobato differt.

Yunnan: P'ing-pien, 1700 m above sea level, on rocky cliffs at the edge of a forest, flower yellow, 15 October 1939, <u>Wang Ch'i-wu 82505</u> (Holotypus); same place, 1400 m above sea level, 25 September 1939, Wang Ch'i-wu 82106.

THE BIG-TOOTHED CHIRITA -- C. grandidentata Plate 16, figure 11

Perennial herb. Stems 10-25 cm tall, unbranched, with rust-colored villous indument, with 2-3 nodes. Leaves opposite; leaf blades ovate, rounded ovate or reniform, 4.5-10.5 cm long, 4-15 cm broad, apex rotund, base shallowly cordate, margin coarsely toothed (teeth oblique ovate, bearing smaller teeth), adaxial side with dense rust-colored puberulence, abaxial side with random small red spots, marginal veins with rust-colored puberulence, lateral veins 4-6 and opposite; the petioles 0.5-10 cm long. Cymes borne above the axil, with a long stalk; the peduncles 4.5-7 cm long, with patent puberulence; the bracts purple, ovate or rounded ovate, 5-8 mm long, margin with sparse marginal hairs, other parts glabrous; the calyx campanulate, ca. 5.5 mm long, glabrous, 5 slightly unequal shallow lobes, the lobes broadly ovate, apex rounded truncate; the corolla purple-red, cylindric, glabrous, tube ca. 18 mm long, diameter at the corolla throat ca. 4 mm, limb bilabiate; stamens 2, borne in the upper part of the corolla tube, glabrous, anthers coherent, elliptic, ca. 1.5 mm long; staminodes 2, filiform, ca. 3 mm long; disk cupulate, glabrous; the pistil ca. 17 mm long, glabrous, ovary narrowly linear, style 2 mm long, stigma 2-lobed.

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In this species the leaf teeth are large, lobe-like, bearing smaller teeth which is its important characteristics, by which it can be distinguished from the other Chiritas of this country.

<u>Chirita grandidentata</u> W. T. Wang, sp. nov. [Acta Phytotax. <u>Sin</u>. 13(3): 104, 1975]

Species nova ab omnibus congenericis sinensibus adhuc notis foliis grosse dentatis, dentibus lobuliformibus denticulatis distinguenda.

Yunnan: Meng-che, 1250 m above sea level, in a mountain valley, in a forest, flower purple-red, June 1936, Wang Ch'i-wu 75354 (Holotypus).

THE LONG-CAPSULED GESNERIAD GENUS --Didymocarpus Wall.

THE HARBINGER-OF-SPRING DIDYMOCARPUS -- D. primulinus Plate 16, figure 12

Perennial acaulescent herb. Leaves 6-7, all borne from the base; the leaf blades deltate or rounded ovate, 1.8-4.6 cm long, 1.6-4 cm broad, apex acuminate, base shallowly cordate or truncate, margin with obscure shallow lobes (the lobes tooth-like, deltate, apex acute, with 1-2 small teeth), sometimes only with blunt teeth, adaxial side with white villous indument, abaxial side with sparse white pubescence, and furthermore, the marginal vein with dense rust-colored villous indument; the petioles 1-4.5 cm long, with dense rust-colored villous indument. Scapes 2-4, 7-12 cm tall, indument similar to that of the petioles; cymes of 1-3 flowers; the bracts narrowly ovate or linear, 3.5-7 mm long; the pedicles 0.9-2.4 cm long, with dense patent pubescence; the calyx oblique campanulate, ca. 7 mm long, outside sparsely puberulent, 5 lobes of which some divided to the base, the lobes somewhat unequal in size, the rear one being the largest, narrowly obovate, ca. 8 mm long, the other 4 linear spathu-late, 6-7 mm long; the corolla whitish red (?), glabrous, the tube funnelform, ca. 9 mm long, limb bilabiate, uper lip ca. 5 mm long, 2 shallow lobes, the lobes broadly oblique ovate, lower lip ca. 8 mm long, 3 deep lobes, the lobes oblong, apex blunt; the stamens 2, borne below the corolla throat, filaments 8 mm long, upper part sparsely puberulent, anthers coherent, densely puberulent; staminodes 2, broadly

linear, 0.5-0.8 mm long; disk annular, glabrous; the pistil ca. 1.4 cm long, ovary linear, with dense white puberulence, style short, glabrous, stigma depressed capitate. Capsule slender clavate, 6-8 cm long, slightly falcate-curved, becoming glabrous.

This species is near the Fukien-Kiangsi Didymocarpus - \underline{D} . <u>heucherifolius</u> Hand.-Mazz., but it can be distinguished by the calyx lobes linear spathulate, corolla glabrous, staminodes 2, ovary without glandular hairs; the calyx lobes of \underline{D} . <u>heucherifolius</u> are narrowly ovate, the outside of the corolla with sparse hairs, staminodes caducous, ovary with eglandular hairs.

Didymocarpus primulinus W. T. Wang, sp. nov. [Acta Phytotax. Sin. 13(3): 105, 1975]

Affinis <u>D</u>. <u>heucherifolio</u> Hand.-Mazz., a quo calycis segmentis spathulato-linearibus, corolla glabra, staminoideis 2, ovario eglanduloso-puberulo distinguitur.

Hunan: Hsueh-feng Mt., 1954, Li Che-t'ang 1891 (Holotypus), 2392; Ch'ine-yang, 1953, Anhuei-Chekiang Agricultural School 51.

(Conclusion)





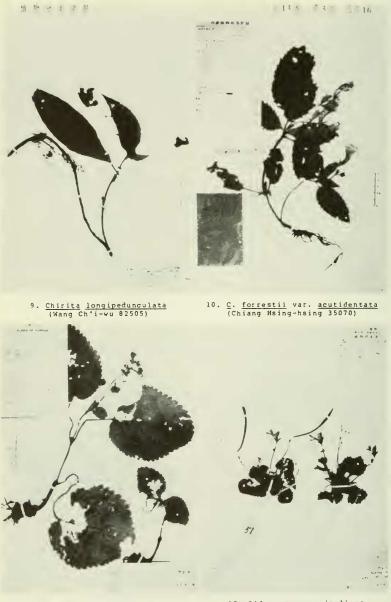
5. Lysionotus kwangsiensis (Ch'en Shao-ch'ing 15021)

6. <u>Ancylostemon</u> <u>humilis</u> (Yang Kuang-hui 59063)





7. <u>Petrocodon</u> <u>denticulatus</u> (Anhuei-Chekiang Agricultural School 407) 8. <u>Opitandra lungshengensis</u> (Kwangtung-Kwangsi-Fukien Expedition 1059)



ll. <u>C</u>. <u>grandidentata</u> (Wang Ch'i-wu 75354)